Lippard Combat NCO

Pistol, Caliber .45, Automatic

Operator and Organizational Maintenance Manual
Including Basic Issue Items List
Repair Parts, Tools and Accessories

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WARNING

Care must be exercised to either have the pistol raised or pointed down range when loading.

Before firing, the firer must be sure that the bore of the pistol is free from any foreign matter. Firing a pistol with any obstruction in the bore will result in damage to the weapon and possible injury to personnel.

Before starting an inspection, be sure to clear the weapon. Do not actuate the trigger until the weapon has been cleared. Remove magazine, inspect the chamber to insure that it is empty and check to see that no ammunition is in position to be introduced.

Section I. Pistol Automatic, Cal .45 Combat NCO™

1-1. General. The semiautomatic pistol, caliber .45 acp, Combat NCO™, is recoil operated, magazine fed, self loading hand weapon. It has a hand held point of aim range of 125 yards; an effective range up to 400 yards. It can be used to 650 yards with marksmanship instruction. It has the following characteristics:

b. Weight with full magazine…….. 3.3 pounds.
c. Magazine capacity……7 rounds.
d. Muzzle velocity…… 859 feet per second.
e. Maximum Range ……1600 yards.
b. Maximum effective range …….400 yards.
c. Length of the barrel is ……..... 5.03 inches.
d. Trigger pull ……..2.5 pounds.
e. The principle parts that contribute to the accuracy of the Combat NCO are the ***NCO* b*arrel, Military Link, and NCO barrel Bushing***.
f. The Combat NCO™ Barrel has a ***Barrel Collar.*** It allows for barrel wear in the NCO Barrel Bushing. This extends barrel life to the limits of the rifling. Barrel material of the Combat NCO is 416 stainless or S7 high chromium tool steel. These materials insure accuracy beyond normal barrel limits and prevent corrosion and pitting. (The S7 barrel is a model A3 and A4 component for Hypervelocity ammunition.)
g. ***NCO Barrel Bushing*** has internal grooves that lubricate the barrel and remove debris on each function cycle.
h. The ***Barrel Linkage*** to the Receiver has been tightened and enlarged for repeatability in firing and accurate lockup to the Slide.
i. The **Barrel torque** experienced in the former M1911A1 Barrel Link has been eliminated with the new ***Military Link***. It forms a unified link the width of the barrel itself. Further no modification of the barrel is required and all the original fitting attributes of a M1911A1 barrel are unchanged. In additional, a Match Grade NCO Barrel comes on every Combat NCO™ pistol made.
j. The Combat NCO™ can accept 1911A1 barrels and barrel link without alteration. This combination provides greater barrel and slide life. Retrofitted, these components can bring most inactive guns back into shooting condition with a small frame alteration and link installation found in the Combat NCO™.
k. The ***Military Link*** comes is 8 sizes to fit any wear adjustment to the limit of serviceability.
l. Many arms can be re-commissioned with Combat NCO™ modifications.
m. The ***Military Link and Bushing*** combination provide for absolute return to battery of the barrel when fired saving Slide and Barrel wear.
n. The additional attributes of the Combat NCO™ involve a Frame and Slide Modification. The Combat NCO™ can be used from -76 degrees to 2600 degrees Fahrenheit when using Nickel Anti Seize MIL-A-907E. This lubrication is deposited in fourteen cut recesses of the frame, slide,

barrel bushing, slide stop and hammer components. As the firearm heats up the material bleeds into the action as required. Conversely in cold conditions it remains a liquid to provide operational capability. Further, in extreme conditions such as HALO applications the gun can be used immediately without it seizing to the hand by subzero temperature.

o. Magazine surfaces are further coated with Teflon an anti moisture application to prevent seizing in cold weather conditions.
p. **The *Receiver and Slide* are made of S7 tool steel for 100% interchangeability of parts and components.**
q. **The *Ejection port*** has been lowered and the back flared to deflect empty cartridges cases to the right and rear of the shooter.
r. ***Extended Slide Stop*** allows for Slide release without shifting the hand position. It allows for use of either hand if needed. The tolerances have been improved between Receiver and Barrel Military Link. Surfaces have been recessed in three locations for Anti-Seize functionality in all weather conditions of friction.
s. ***Ambi Safety*** allows for weak hand use of the pistol safety. A positive Safety on either side makes the Safety reliable for long use. The enlarged size facilitates manual operation under extreme conditions. A 4-40 threaded screw is that is required to service and clean the part.
t. **The *Sear ledge*** has also been modified to channel debris that could invade the pistol from a cocked and locked condition away from the Sear ledge that could cause the pistol to fail.
u. **The *Hammer*** has rebated side walls to prevent stoppage in a mud condition or fouling. On the inside frame contact surfaces are rebated providing a reservoir for anti-seize for functioning in extreme weather conditions but also to capture impurities invading the Hammer area contact space that could cause malfunctions.
v. **The *Grip Safety*** cavity in the Receiver has been modified to eliminate the malfunctions found to occur from ice, mud, blood and other debris pressed into the Frame that prevents the Grip Safety from being applied.
w. **The *Firing Pin*** has added serrations to clean the firing pin during firing preventing malfunctions.
x. **The *Front Sight* is luminous. When combined with the two on the rear sight the three dots horizontally aligned provide a shooting plane for 25 yard point of aim firing accuracy.** It further **the front sight** has graduations of yardage in which the pistol can be aimed at 50, 225, and 400 yards without sight adjustment if required.
y. **The Rear Fixed Sight** is serrated to deflect light to a rear downward angle providing a clear sight picture without reflection to the eye under all conditions. The top rear surface has a luminous dot on either side of the aperture. When aligned with the front sight dot it presents a line of reference in which to accurately shoot point of aim to 25 yards. The upper edge surface of the Rear Sight provides a killing surface in the final use of a Combat NCO™ in a defense mode. An in Offensive mode an enemy can be dispatched if hit with the Rear Sight.

z. **A patented Accessory Rail** can be attached to the frame of the Combat NCO™ to use of additional accessories and remove without screws.

1-2. Combat NCO™ Accessories:

a. The Combat NCO™ can be ***fully silenced*** and take on **multi forms** to meet all combat situations. It has a **Rifle component** configuration. It can be upgraded to the Combat 1911A3 and 1911A4 systems in testing where **new ammunition** and components will be available if approved for military use.

b. **The NCO *Adjustable Rear Sight*** is an accessory that looks almost exactly like Fixed Rear sight and shares its attributes. However it can be mechanically adjusted to move the sights for different ammunition.

c. **A new NCO *Sear*** design allows for greater safety of the firearm under all conditions and trigger pulls. In conjunction with Sear Spring a choice of trigger pull weight can be selected from 2-12 pounds. It requires no fitting and the pull weight can be predetermined.

d. ***NCO NosePiece Accessory:*** The Combat NCO™ may add a weighted NosePiece to provide stability in a fully loaded condition of 7 rounds and stabilizes the Combat NCO™ in acquiring targets or providing suppressing fire at long distances. Further, the *NosePiece* can and does contain muzzle blast condensing said blast into an orange cone. The shooter retains night vision and suppresses visual complications with night vision optics.

e. ***NCO NosePiece Laser*** can be installed in the lower disassembly hole on the NosePiece. That hole is threaded. An NCO Laser can be screwed into this receptacle and provide an aiming device in low light conditions and to laze targets up to 1 ½ miles to direct other munitions on targets.

f. ***NCO Ambi magazine release*** allows for better ejection of empty magazine without shifting the hand to eject or remove with either hand. It allows magazine release in extreme cold.

g. **A *SolidRifle* component** can be added to the lower unit or frame. A number of rifle calibers are available for special operations using the Combat NCO™.

h. ***NCO .45 acp S7* barrels** can be ordered and retrofitted to CQBP. This barrel made for the Lippard Combat NCO™ 1911A3 uses advanced ammunition not currently available and is 16 times stronger than current barrels in use. The barrel will accept conventional .45 acp ammunition in service as well as the ultra high velocity ammunition in testing. The barrel is identified by the nomenclature located on the chamber hood.

Section II. Diagram and Pictures

Fig. 1 Lippard Combat NCO™

Fig. 2 Optional Nosepiece Component

Section III. SIGHTS

3-1. SIGHTS. The Combat NCO™ has multiple faceted Front Sights. There are serrations that are used for deflection of light and a depository of color enhancement for different conditions. A "touch target system" is employed for offensive engagement close firing at distances from point blank to 50 yards and measured distances firing in sight graduations of 220, 295 and 400 yards. (depending on the ammo used and 6 o'clock hold)

a. The method of sight use is to always keep the target in the same location on the front sight blade regardless of distance. The Combat NCO™ will shoot flat to a distance of 125 yards by aligning the rear sight with the top of the front sight blade. The Front Sight Blade is of such a size as to be readily picked up by the eye and an enemy "Touched" with the front Sight Blade is fired upon immediately and loosely aimed. Targets beyond 50 yards are aimed shots and the Combat NCO™ Front Sight allows for accurate shot placement to 125 yards.

b. A target estimated to be 220 yards the Rear Sight is dropped down to the first Front Sight notch. Here the trigger is pulled and a target reduced. This applies for the second notch on the Front Sight for 295 yds. You lower the Rear Sight again while holding the target at the same place on the top of the Front Sight blade and pull the trigger. A target deemed to be at 400 yards the Rear Sight is dropped down to the bottom of the Front Sight blade to its Sight base. That location is 400 yards for 6 o'clock hold sighting.

c. For Cover Fire up to 650 yards can be achieved by taking the target from the top of the Front Sight blade and dropping it down to the bottom and beside the front Sight blade where the Rear Sight is holding. Then slowly move the Front and Rear Sight over to cover the target and the Combat NCO™ will shoot 650 yards without further sights adjustment.

Fig. 3 Short Range Touch and Long Range Front Sight System.

3-2. Combat NCO™ SIGHTING SYSTEM:

a. The Combat NCO™ is 650 yard tactical weapon. There are no glow in the dark sights. For dim light or a changing light condition simple chalk is used of different colors to compensate. As that condition changes wipe the front sight and you are back to black or change color to another.

b. The Combat NCO™ can be called upon to shoot further. In a tactical situation the marksman will learn to *call target distances* in his mind. Up to 125 yards the Combat NCO™ can engage immediately and fire point of aim as with 25 yards. There are three more points on the Combat NCO™ front sight that allows a marksman to extend the range.

c. The Combat NCO™ front sight has a series of notches. The First notch is for 220 yards. The Second notch is for 295 yards. And the Third is the base of the front sight; 400 yards using standard 230 grain FMJ .45 acp military Hard Ball ammunition with sight set 6 o'clock at 25 yards.

1. To sight the pistol at ranges indicated, the target is viewed the same as at 25 yards: *center mass.*
2. With target location in view, Drop the REAR Sight down to align with the First range notch of 220 yards. Hold this position and squeeze the trigger until the pistol fires.
3. At 295 yards the same sight picture applies for the second notch.
4. At 400 yards the same picture applies when aiming using the BASE of the front sight. The target however remains in view the same as at 25 yards.

d. To shoot these distances requires a firm grip on the weapon with the right hand. The left hand is wrapped around the grip of the right hand, and the forefinger of the left hand, wrapped around the front of the weapon trigger guard. The trigger should rest under the PAD of the marksman's trigger finger.

e. When a marksman identifies a target at 200 yards; he "calls that distance to himself"; aligns his sights immediately to the proper notch on the front sight, (or part thereof) and fires on that target is a matter of seconds with the Combat NCO™ battle sights. Practice shooting various distances on a man size silhouettes will quickly provide expertise in target distance identification and shooting skill.

f. In practice it is recommended that a marksman shoot into, and thru different types of cover such as steel vehicles, wood barriers, doors at various distances, to learn the penetration of the .45acp and full Combat NCO™ weapon capability. This will give confidence and experience at different ranges thus making the marksman fully qualified with the weapon and ready to engage targets to the limits of the Combat NCO™ effective range both at 25 yards, to the maximum range of its capability when called on to do so.

g. The Combat NCO™ front sight can be installed in conventional M1911A1 staked front sight in upgrade without modification to the Slide.

3-3. COVER FIRE. *Cover fire* is covering the movement of another to a preferred position or, to a position of safety. There is another type of *Cover Fire* and that is to protect, cover a front, or to augment your fire over another's position. Your position and location may NOT BE in the line of fire or even engaged. However another part of your unit may be engaged with a superior force where your combined fire can increase a unit's effectiveness. It may become necessary that all fire power of a supporting unit be brought to bear in Cover Fire. The Combat NCO™ gives marksman the ability to rain down *Cover Fire* from a safe distance to aid in such a tactical situation.

a. For this type of fire the rear sight of the Combat NCO™ is lowered to the base of the front sight as with 400 yard shooting; however now the Target is no longer held center mass. The target instead is brought down *beside* the front sight blade to the *base* of the front sight. Then the front sight is moved horizontally over covering the target. The weapon is slowly fired. That distance is 650 yards.

3-4. COMBINED FIRE. This goes hand in hand with *Cover Fire*. It uses the *Combined Fire* of all a units' assets to bring to bear on a given target. *Combined Fire* is a coordinated firing of pistol, combined with rifle, adding 10-15% to a unit's offensive firepower strength in a time of need for maximum effectiveness.

a. The Combat NCO™ has the capability to provide cover fire up to 650 yards with existing sights. That means supporting fire on a target can be covered by a radius of 1,300 yards; a massive advantage to tactical operations. Marksman can engage from a distance which in turn demoralizes an enemy force into withdrawal or, reduces it by effective use of a Combat NCO™.

3-5. LIGHT CONDITIONS. The Combat NCO™ has serrations which can also be used to illuminate the entire sight with the use of chalk, tooth paste, paint or any material available including spit and dirt.

a. The use of chalk in white, orange, or any suitable color can be used intermittently with the natural Front Sight color or the dot configuration. Carry a couple of chalk sticks in the pocket.
b. For indoor "house to house" low light conditions the Front Sight with illumination will provide sight identification. If chalk is used, when the indoor threat is reduced wipe the Front Sight with the thumb and select another color for a new light conditions or simply leave the natural color of the Front Sight until another light condition presents itself.

Section IV. 7 Round Magazine

4-1. MAGAZINE. The Combat NCO™ 7 round magazines are tempered steel and coated with Teflon to reduce friction and sticking to the hands during cold weather. A special 2 stage spring is used to insure continuous pressure on the rounds throughout the magazine cycle of 7 cartridges. However, the Combat NCO™ using a "touch system" recommends the use of Double Tap or shooting 2 rounds at a time loading or shooting six rounds then jettisoning the magazine. (Cam Ne weighted) In a combat situation it has been proven that rounds are lost in count after six are expended.

Fig. 4 Seven Round Magazine with Cam Ne bumper Accessory

Section V. DISSEMBLY INSTRUCTIONS

5-1. DISASSEMBLY OF THE WEAPON. The Lippard Combat NCO™ is a variant of the Browning 1911 model. It has patented and improved parts and components.

1. Remove the magazine.
2. Point the weapon in a safe direction and open the slide; inspect to insure pistol is unloaded.
3. Close the Slide.
4. Place the weapon on manual safe with the hammer cocked.
5. Depress the NosePiece Plug.
6. Rotate the NosePiece Counter clockwise removing it with the Spring Plug under tension of your finger. For a standard bushing rotate it CLOCKWISE and remove the Spring Plug. Fig. 5
7. Slowly release the tension of the Recoil Spring holding in firmly on the Spring Plug.
8. Replace the NosePiece over the barrel at 90 degrees but do not install holding the barrel in position for disassembly. (If a Bushing is installed only remove after the Slide has been removed from the Frame.)
9. Unlock the manual safety.
10. Open the Slide to the Slide Disassembly notch. Fig. 6.
11. Remove the Slide Stop pin.
12. Upside down Remove the Slide.
13. Remove the Nosepiece.
14. Remove the Recoil Spring, Spring Plug and Recoil Spring Guide.
15. Remove the barrel.

To re-assemble, reverse the disassembly process.

Figure 5. Remove the Recoil Spring Plug

Fig. 6 Move Slide to the Slide Stop Disassembly Notch

Fig. 7 Remove the Slide

Fig. 8 Field Disassembly

5-2. LUBRICATION OF THE WEAPON. A Lippard Combat NCO™ has fourteen reservoirs for Lubrication. Four on the Slide rails, two on the Frame rails, three inside the Barrel Bushing, 3 on the Slide Stop, and two on the Hammer. On these 14 areas you put recommended Lippard Nickel Anti-seize Mil-A-907E or issue MIL-PRF-14107D until these recesses are filled. As the pistol fires, it lubricates the Frame, Slide, Barrel, Military Link and Hammer to keep it from freezing, removing fouling, and as the gun heats up, bleeds lubrication to keep the pistol functioning. Only a very small amount is needed on the pistol. The Pistol CAN BE shot dry without damage. Lubrication is for water immersion, cold weather and prolonged shooting in high temperature. Made of S7 tool steel at RC 48 it is believed the pistol will can never be damaged from dry shooting or seize under normal conditions. HOWEVER, the Barrel Bushing and or Nosepiece must have oil or anti-seize for reliable firing.

Section VI. CARE AND CLEANING UNDER NORMAL CONDITIONS

6-1. CLEANING OF THE WEAPON. Cleaning is part of scheduled maintenance and should always begin with an inspection of the weapon system. Begin by field stripping the pistol, as described in para 5-1 on page 11. Use the tools and equipment listed in Table 6-2 to clean and lubricate the pistol. The pistol should be cleaned as soon as possible after firing, and each time it is exposed to field conditions.

******WARNING ******

Make sure the pistol is safe before cleaning. Ensure that the pistol is not loaded.

To clean a Lippard Combat NCO™ that has seized, does not function, or has become fouled; apply AntiSeize MIL-A-907E to the frame rails and hand cycle the pistol 10 times until free and cycling smoothly. The pistol now has suspended the fouling. It can be wiped clean or cleaned normally with MIL-PRF-63460D Cleaner.
The standard cleaning kit for the CQBP is the NSN 1005-01-455-0575.

a. Rust.
    1. Rust on the weapon can be caused by acid chemical reaction with the low carbon metal properties but is only superficial. It is not harmful to the weapon as S7 is extremely resistant to salt or corrosive chemicals. A bare surface can be renewed with use of "Scotch Brite" type cleaning pad.

b. Bore and Chamber.
    1. Cleaning is normal for stainless 416 materials and S7 NCO barrels. Assemble cleaning rod with bore brush. Wet bore brush with CLP or riffle bore cleaner (RBC). Caution: Never reverse direction of the bore brush inside the bore. This damages the bore brush and could damage the bore as well.
    2. Insert the cleaning rod into the bore and push carefully until the bore brush protrudes completely from the chamber. Pull bore brush back through clearing the chamber. Repeat this procedure several times keeping the bore brush wet.
    3. Assemble cleaning rod with the swab holder. Insert a clean swab on the cleaning rod and run the swab through the bore and out of

the chamber. Change swabs and continue until a swab comes out clean.

c. Slide Assembly.
    1. Scrub the face of the slide with the small cleaning brush (toothbrush). With a swab or rag dampen with CLP, wipe all outer surfaces. Be sure to remove all primer residue and to clean in and around the exterior of the recoil spring plug.
    2. Use CLP to clean the recoil spring guide and helical spring. Keep the *shok-buff* clean if present, clean and dry. Clean both the interior and exterior of the recoil spring plug.
    3. Use CLP to clean both the interior and exterior of the barrel bushing.

d. Receiver.
    1. The hammer, ambidextrous thumb safety, magazine catch, trigger and trigger guard all be scrubbed down using a cleaning brush and CLP. Use cotton tip applications to clean hard to reach areas.

e. Slide Stop. Clean the slide stop pin with rag dampened with CLP.
f. Barrel Bushing. Clean the barrel bushing internal grooves with rag dampened with CLP.
g. Magazine Assembly. Clean the magazine with rag dampened with CLP.

6-2. LUBRICATION THE WEAPON. Field strip the weapon (para 5-1 on page 11) and lubricate in accordance with TM 9150-15/1. Caution: Use only authorized lubrication. Do not mix lubricants. In addition there are fourteen lubrication reservoirs that accept MIL-A-907E. They are: Barrel bushing grooves, slide stop, hammer, receiver and slide grooves. Only a small amount of MIL-A-907E is needed on the pistol to keep it functional in all conditions. (Also see 5-2 for dry shooting)

a. Use CLP, an approved weapon lubricant, e.g. LSA, LSA-T, or LAW to moderately lubricate the following areas:
    1. Guide rails of the receiver assembly
    2. Grooves internally on the receiver rails
    3. Grooves internally of the barrel bushing
    4. Guide rails of the receiver assembly
    5. Grooves internally on the slide rails
    6. Grooves internally on the hammer

b. Lightly lubricate all other areas, including the bore and the magazine well. If the pistol has been exposed to salt water, dry it thoroughly, clean, and lubricate as soon as possible.

Caution
Excessive oil could cause loss of control during firing.

c. Prior to loading the pistol, attention should be directed to wiping all visible oil from the bore and exterior areas.

6-3. SAFETY CHECK TESTS. Whenever the Combat NCO™ .45 caliber Pistol is reassembled, perform the below listed safety checks. If the safety checks perform as indicated, the pistol is operationally ready. If the checks do not perform as indicated, report the problem to the unit Armorer.

Warning
Make certain the pistol is cleared.

a. **Manual Safety.** With the hammer cocked and the weapon ON manual safety and the hand grasping the grip safety, pull the trigger. If the hammer does not fall the manual safety is working properly.
b. **Grip Safety.** With the hammer cocked and the weapon OFF manual safety and the hand NOT grasping the grip safety, pull the trigger. If the hammer does not fall the grip safety is working properly.
c. **Half-cock Notch.** Draw back the hammer until the sear engages the half-cock notch and squeeze the trigger. If the hammer falls the sear or the hammer must be replaced.
d. **Disconnector.** Cock the hammer. Shove the slide one–quarter inch to the rear; hold slide in that position and squeeze the trigger. Let the slide go forward maintaining pressure on the trigger. If the hammer falls, the disconnector is worn and must be replaced.

Section 7
Part Numbers and Tools

No.	Part
1	Barrel NCO .5808-.581
112	Bushing NCO .582
113	Bushing NCO .581
114	Bushing NCO .580
115	Bushing NCO .579
116	Bushing NCO .578
117	Bushing NCO .577
225	Nose Piece NCO .582
226	Nose Piece NCO .581
227	Nose Piece NCO .580
228	Nose Piece NCO .579
229	Nose Piece NCO .578
230	Nose Piece NCO Cmdr .582
231	Nose Piece NCO Cmdr .581
232	Nose Piece NCO Cmdr .580
233	Nose Piece NCO Cmdr .579
3A1	Military Link undersize 1
3A2	Military Link size std 2
3A3	Military Link size 3
3A4	Military Link size 4
4	Barrel Link Pin
5	Disconnector
6	Ejector
7	Ejector pin
8	Extractor
9	Firing Pin .45
11	Firing Pin Spring
12	Firing Pin Stop
13	Grips Pachmayr CQBP
16	Hammer pin

17 Hammer Strut
18 Hammer Strut pin
19 Magazine
19A Cam Ne Bumper
19B Cam Ne Screws
20 Mag Release Ambi
21 Magazine Spring
26 Main spring cap
27 Main spring cap pin
28 Mainspring Housing
288 Mainspring Housing Loop
289 Mains Housing Loop Pin
29 Mainspring Housing pin
30 Main spring cap retainer
31 Plunger spring
35 Recoil Spring 16.5
36 Recoil Spring Guide
37 Recoil Plunger plug
41 Sear Pin
42 Sear Spring
43 Front Site CQBP
44 Rear Site CQBP
441 Rear Site NCO
442 Rear Site NCO Adjustable
471 Slide Stop NCO
45 Slide CQBP
47 Slide Stop NCO
49 Grip Screws 4 set
50 Grip bushing 4 set
51 Trigger
53 Grip Safety NCO
54 Hammer NCO Commander
544 Hammer Standard
55 Mag Follower
56 Mag spring
57 Mainspring
59 Frame CQBP
60 Safety Ambi NCO Left
61 Safety Ambi NCO Right
62 Safety Ambi Post
63 Safety Ambi Pin
64 Safety Ambi Screw 2-56
65 Sear Chip NCO
66 Tool Kit Small Arms TK-2111